Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A turbine component having a substrate formed from a ceramic material select
ed from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating comprising at least 15 mol% of at least one lanthanide sesquioxide and the balance comprising ceria.

2. (original) A turbine component according to claim 1, wherein said ceramic material comprises a monolithic ceramic material.

3. (currently amended) A turbine component according to claim 1, wherein said ceramic material is selected from the group consisting of silicon nitride and self-reinforced silicon nitride.

4. (original) A turbine component according to claim 1, wherein said ceramic material comprises a composite ceramic material.

5. (currently amended) A turbine component according to claim 1, wherein said ceramic material is selected from the group consisting of a silicon carbide-silicon carbide material and a carbon-carbon materials.

6. (cancelled)

7. (currently amended) A turbine component according to claim ~~6~~ 1, wherein the first oxide is present in an amount greater than 50 mol%.

8. (currently amended) A turbine component according to claim ~~6~~ 1, wherein the at least one lanthanide sesquioxide has a formula A_2O_3 where A is selected from the group consisting of La, Pr, Nd, Sm, Eu, Tb, and mixtures thereof.

9. (currently amended) A turbine component according to claim ~~6~~ 1, wherein said at least one lanthanide sesquioxide is present in a total amount in the range of 15 to 45 mol%.

10. (currently amended) A turbine component according to claim ~~6~~ 1, wherein said at least one lanthanide sesquioxide is present in a total amount of at least 25 mol%.

11 - 13. (cancelled)

14. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, the thermal barrier coating ~~comprises~~ comprising greater than 30 mol% Sc_2O_3, said at least one lanthanide sesquioxide comprises a lanthanide sesquioxide having a formula A_2O_3 where A is selected from the group consisting of Nd, Eu, Dy, Gd, Er, Pr, and mixtures thereof, and the balance being zirconia.

15. (original) A turbine component according to claim 14, wherein said zirconia is present in an amount greater than 40 mol%.

16. (original) A turbine component according to claim 14, wherein said coating has less than 10 vol% of phases with a pyrochlore crystal structure.

17. (original) A turbine component according to claim 14, wherein said lanthanide sesquioxide is present in an amount in the range of from 0.001 to 30 mol%.

18. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, the thermal barrier coating ~~comprises~~ comprising more than 20 mol% In_2O_3, said at least one lanthanide sesquioxide comprises a lanthanide sesquioxide having a formula A_2O_3 where A is selected from the group consisting of Er, Nd, Eu, Dy, Gd, Pr, and mixtures thereof, and the balance being zirconia.

19. (original) A turbine component according to claim 18, wherein said zirconia is present in an amount greater than 40 mol%.

20. (original) A turbine component according to claim 18, wherein said coating contains less than 10 vol% of phases with a pyrochlore crystal structure.

21. (original) A turbine component according to claim 18, wherein said lanthanide sesquioxide is present in an amount from 0.001 to 40 mol%.

22. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, the thermal barrier coating ~~broadly comprises~~ consisting of from 5 to 60 mol% of at least one of La_2O_3 and Sm_2O_3, and from 5 to 60 mol% of at least one oxide having a formula A_2O_3 where A is selected from the group consisting of Sc, In, Y, Pr, ~~nd,~~ Nd, Eu, Gd, Dy, Er, Yb, and mixtures thereof, and the balance being zirconia.

23. (original) A turbine component according to claim 22, wherein said zirconia is present in an amount greater than 40 mol%.

24. (original) A turbine component according to claim 22, wherein said coating contains less than 10 vol% of phases with a pyrochlore crystal structure.

25. (currently amended) A turbine component ~~according to claim 22, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, the thermal barrier coating ~~comprises~~ consisting of from 0.5 to 22.5 mol% of at least one first oxide having a formula A_2O_3 where A is selected from the group consisting of La, ~~Sm,~~ Tb, Tm, and Lu combined with a

second oxide selected from the group consisting of zirconia, hafnia, and ceria.

26. (original) A turbine component according to claim 25, wherein said second oxide is present in an amount of at least 77.5 mol%.

27. (currently amended) A turbine component ~~according to claim 25, wherein said coating further comprises~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, the thermal barrier coating consists of from 0.5 to 22.5 mol% of at least one first oxide having a formula A_2O_3 where A is selected from the group consisting of La, ~~Sm,~~ Tb, Tm, and Lu, a second oxide selected from the group consisting of zirconia, hafnia, and ceria, and from 0.5 to 59.5 mol% of at least one third oxide from the group consisting of In_2O_3, Sc_2O_3, ~~Y_2O_3,~~ MgO, CaO, and mixtures thereof and said second oxide being present in an amount greater than 40 mol%.

28. (currently amended) A turbine component ~~according to claim 25, wherein said coating further comprises~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, the thermal barrier coating consists of from 0.5 to 22.5 mol% of at least one first oxide having a formula A_2O_3 where A is selected from the group consisting of La, ~~Sm,~~ Tb, Tm, and Lu, a second oxide selected from the group consisting of zirconia, hafnia, and ceria, and from 0.5 to 22.5 mol% of at

least one third oxide selected from the group consisting of ~~CeO_2~~, Pr_2O_3, Nd_2O_3, Eu_2O_3, Gd_2O_3, Dy_2O_3, Er_2O_3, Yb_2O_3, and mixtures thereof, and said at least one first oxide and said at least one third oxide being present in a total content less than 22.5 mol%.

29. (currently amended) A turbine component ~~according to claim 1, wherein said coating comprises~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, the thermal barrier coating consisting of from 0.5 to 1.0 mol% of at least one first oxide from the group consisting of ~~CeO_2~~, Pr_2O_3, Nd_2O_3, Eu_2O_3, Gd_2O_3, Dy_2O_3, Er_2O_3, Yb_2O_3, In_2O_3, Sc_2O_3, ~~Y_2O_3~~, and mixtures thereof, combined with ~~a second oxide selected from the group consisting of zirconia, hafnia, and~~ ceria.

30. (currently amended) A turbine component ~~according to claim 29, further comprising~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, the thermal barrier coating consisting of from 0.5 to 1.0 mol% of at least one first oxide from the group consisting of Pr_2O_3, Nd_2O_3, Eu_2O_3, Gd_2O_3, Dy_2O_3, Er_2O_3, Yb_2O_3, In_2O_3, Sc_2O_3, and mixtures thereof, a second oxide selected from the group consisting of zirconia, hafnia, and ceria, and from 0.5 to ~~22.5~~ 21.5 mol% of at least one third oxide selected from the group consisting of La_2O_3, ~~Sm_2O_3~~, Tb_2O_3, Tm_2O_3, Ho_2O_3, Lu_2O_3, ~~MgO~~, CaO, and mixtures thereof, said at least one first oxide and said at least one third oxide being present

in a total amount of less than 22.5 mol%, and said second oxide being present in an amount of at least 77.5 mol%.

31. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, the thermal barrier coating ~~comprises~~ consisting of from 20.5 to 22.5 mol% of CeO_2 combined with an oxide selected from the group consisting of zirconia~~,~~ and hafnia~~, and ceria~~.

32. (original) A turbine component according to claim 31, wherein said oxide is present in an amount of at least 77.5 mol%.

33. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating ~~comprises~~ consisting of from 0.5 to 22.0 mol% of CeO_2, and from 0.5 to 22.0 mol% of at least one first oxide selected from the group consisting of La_2O_3, Sm_2O_3, Tb_2O_3, Tm_2O_3, Ho_2O_3, Lu_2O_3, MgO, CaO, Pr_2O_3, Nd_2O_3, Eu_2O_3, Gd_2O_3, Dy_2O_3, Er_2O_3, Yb_2O_3, and mixtures thereof, combined with a second oxide selected from the group consisting of zirconia and hafnia, and said CeO_2 and the at least one first oxide being present in an amount no greater than 22.5 mol%.

34. (original) A turbine component according to claim 33, wherein said second oxide is present in an amount of at least 77.5 mol%.

35. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating ~~comprises~~ consisting of from 0.5 to 22.5 mol% of CeO_2, from 0.5 to 59.5 mol% of at least one oxide selected from the group consisting of In_2O_3, Sc_2O_3, and mixtures thereof, combined with at least 40 mol% of an oxide selected from the group consisting of zirconia and hafnia.

36. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating ~~comprises~~ consisting of from 9.0 to 22.5 mol% of at least one first oxide selected from the group consisting of Pr_2O_3, Nd_2O_3, Eu_2O_3, ~~Er_2O_3,~~ and mixtures thereof, combined with a second oxide selected from the group consisting of zirconis, hafnia, and ceria.

37. (original) A turbine component according to claim 36, wherein said second oxide is present in an amount greater than 77.5 mol%.

38. (currently amended) A turbine component ~~according to claim 36, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating ~~further comprises~~ consisting of from 9.0 to 22.5 mol% of at least one oxide selected from the group consisting of Pr_2O_3, Nd_2O_3, Eu_2O_3, ~~Er_2O_3,~~ and mixtures thereof, a second oxide selected from the group consisting of hafnia and ceria, and from 0.5 to 51 mol% of at least one third oxide selected from the group consisting of Yb_2O_3, In_2O_3, ~~Sc_2O_3~~ Y_2O_3 Gd_2O_3, MgO, CaO, and mixtures thereof and said second oxide being present in an amount of at least 40 mol%.

39. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating ~~comprises~~ consists of from 15.0 to 22.5 mol% of a first oxide selected from the group consisting of Dy_2O_3 and Yb_2O_3 combined with at least 77.5 mol% of a second oxide selected from the group consisting of zirconia, hafnia, and ceria.

40. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating ~~comprises~~ consisting of from 0.5 to 59.5 mol% Dy_2O_3 and from 0.5 to 59.5 mol% of at least one oxide from the group consisting of

In_2O_3, ~~Sc_2O_3,~~ ~~MgO,~~ CaO, and mixtures thereof, combined with at least 40 mol% of an oxide selected from the group consisting of zirconia, hafnia, and ceria.

41. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating ~~comprises~~ consisting of from 0.5 to 59.5 mol% Yb_2O_3 and from 0.5 to 59.5 mol% of at least one oxide from the group consisting of In_2O_3, ~~Sc_2O_3,~~ ~~MgO,~~ CaO, and mixtures thereof, combined with at least 40 mol% of an oxide selected from the group consisting of zirconia, hafnia, and ceria.

42. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating ~~comprises~~ consisting of from 20.5 to 60 mol% of at least one oxide from the group consisting of In_2O_3, Sc_2O_3, MgO, CaO, and mixtures thereof, combined with at least 40 mol% of an oxide selected from the group consisting of zirconia, hafnia, and ceria.

43. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating

~~comprises~~ consisting of from 15 to 59.5 mol% Y_2O_3, from 0.5 to 45 mol% of at least one first oxide selected from the group consisting of La_2O_3, Sm_2O_3, Tb_2O_3, Tm_2O_3, Ho_2O_3, Lu_2O_3, MgO, CaO, Pr_2O_3, Nd_2O_3, Eu_2O_3, Dy_2O_3, Er_2O_3, Yb_2O_3, In_2O_3, Sc_2O_3, and mixtures thereof, combined with at least 40 mol% of ~~an oxide selected from the group consisting of zirconia, hafnia, and~~ ceria.

44. (currently amended) A turbine component ~~according to claim 1, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, said thermal barrier coating ~~comprises~~ consisting of from 9.0 to 23.0 mol% Gd_2O_3, from 0.5 to 45 mol% of at least one first oxide selected from the group consisting of La_2O_3, Sm_2O_3, Tb_2O_3, Tm_2O_3, Ho_2O_3, Lu_2O_3, MgO, CaO, Pr_2O_3, Nd_2O_3, Eu_2O_3, Dy_2O_3, Er_2O_3, Yb_2O_3, In_2O_3, Sc_2O_3, and mixtures thereof, combined with at least 40 mol% of ~~an oxide selected from the group consisting of zirconia, hafnia, and~~ ceria.

45. (original) A turbine component according to claim 1, further comprising at least one bond coat layer between said substrate and said thermal barrier coating, and said at least one bond coat layer providing coefficient of thermal expansion matching, oxidation resistance and corrosion resistance.

46. (currently amended) A turbine component ~~according to claim 45, wherein~~ having a substrate formed from a ceramic material selected from the group consisting of a monolithic ceramic material and a composite ceramic material and a thermal barrier coating bonded to said substrate, a bond coat layer between and

in contact with said substrate and said thermal barrier coating, said ~~at least one~~ bond coat layer ~~is~~ being formed from Ta_2O_5.

47. (original) A turbine component according to claim 45, wherein said at least one bond coat is formed from a rare earth disilicate having the formula $X_2Si_2O_7$ where X is selected from the group consisting of La, Nd, Pr, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu.

48. (original) A turbine component according to claim 45, wherein said at least one bond coat layer comprises $Y_2Si_2O_7$.

49. (original) A turbine component according to claim 45, wherein said at least one bond coat layer comprises mullite.

50. (original) A turbine component according to claim 45, wherein said at least one bond coat layer comprises barium strontium alumino silicate.

51. (original) A turbine component according to claim 45, wherein said at least one bond coat layer comprises yttrium aluminum garnet.

52. (original) A turbine component according to claim 45, wherein said at least one bond coat layer comprises ytterbium aluminum garnet.

53. (original) A turbine component according to claim 45, wherein said at least one bond coat layer comprises rare-earth aluminate garnets wherein the rare earth is selected from the

group consisting of Gd, Tb, Dy, Ho, Er, Tm, Lu, and mixtures thereof.

54. (original) A turbine component according to claim 45, wherein said bond coat is formed from a plurality of distinct layers.

55. (original) A turbine component according to claim 45, wherein said bond coat is formed from a plurality of functionally graded layers.